

*B<sub>1</sub>*

*Cont*

- a) a liposome comprising a lipid bilayer, wherein the lipid bilayer is comprised of neutral phospholipids and cholesterol;
- b) at least one GM-1 ganglioside molecule disposed in the lipid bilayer;
- c) a cholera toxin  $\beta$  subunit bound to a GM-1 ganglioside molecule;
- d) an MHC component loaded with an antigen, wherein the antigen-loaded MHC component is bound to the cholera toxin  $\beta$  subunit; and
- e) an accessory molecule that can stabilize an interaction between a T cell receptor and the antigen-loaded MHC component.

2. (twice amended) An artificial antigen presenting cell according to claim 1 having a plurality of GM-1 ganglioside molecules, wherein a portion of the GM-1 ganglioside molecules form rafts in the lipid bilayer of the liposome.

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*Cont*

- 6. (twice amended) An artificial antigen presenting cell, comprising:
  - a) a liposome comprising a lipid bilayer, wherein the lipid bilayer is comprised of neutral phospholipids and cholesterol;
  - b) at least one GM-1 ganglioside molecule disposed in the lipid bilayer;
  - c) a cholera toxin  $\beta$  subunit bound to a GM-1 ganglioside molecule;
  - d) at least one tetravidin molecule bound to the cholera toxin  $\beta$  subunit;
  - e) a biotinylated MHC component loaded with an antigen, wherein the biotinylated MHC component loaded with antigen is bound to the tetravidin molecule of (d); and
  - f) a biotinylated accessory molecule that can stabilize an interaction between a T cell receptor and the antigen-loaded MHC component, wherein the biotinylated accessory molecule is bound to the tetravidin molecule of (d).

7. (twice amended) An artificial antigen presenting cell according to claim 6 having a plurality of GM-1 ganglioside molecules, wherein a portion of the GM-1 ganglioside molecules form rafts in the lipid bilayer of the liposome.